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(6) Three 100 kHz channels paired with 50 kHz channels:
Channel 23: 940.55–940.65 and 901.45–901.50 MHz;
Channel 24: 940.30–940.40 and 901.55–901.60 MHz; and
Channel 25: 940.45–940.55 and 901.85–901.90 MHz.

(b) Five frequencies are available for assignment on a regional basis as follows:
(1) One 50 kHz channel paired with 50 kHz channel:
Channel 12: 940.25–940.30 and 901.25–901.30 MHz.
Channel 13: RESERVED.

(2) Four 50 kHz channels paired with 12.5 kHz channels:
Channel 14: 930.55–930.60 and 901.7875–901.8000 MHz;
Channel 15: 930.60–930.65 and 901.8000–901.8125 MHz;
Channel 16: 930.65–930.70 and 901.8125–901.8250 MHz; and
Channel 17: 930.70–930.75 and 901.8250–901.8375 MHz.

(c) Seven frequencies are available for assignment on an MTA basis as follows:
(1) Three 50 kHz unpaired channels:
Channel 26: 901.35–901.40 MHz;
Channel 27: 901.40–901.45 MHz; and
Channel 28: 940.40–940.45 MHz.

(2) One 50 kHz channel paired with 50 kHz channel:
Channel 29: 930.80–930.85 and 901.95–902.00 MHz.

(3) One 100 kHz channel paired with 50 kHz channel:
Channel 30: 930.30–930.40 and 901.65–901.70 MHz.

(4) One 150 kHz channel paired with 50 kHz channel:
Channel 31: 930.85–931.00 and 901.7–901.75 MHz.

(5) One 100 kHz channel paired with 12.5 kHz channel:
Channel 32: 940.90–941 and 901.8375–901.85 MHz.

Note to § 24.129: Operations in markets or portions of markets which border other countries, such as Canada and Mexico, will be subject to on-going coordination arrangements with neighboring countries.

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border must limit their effective radiated power in accordance with the following formula:

\[ PW = 0.0175 \times d \times km^* \times 6.6666 \times hm^* \times 3.1997 \]

PW is effective radiated power in watts

dkm is distance in kilometers

hm is antenna HAAT in meters; see §24.53 for HAAT calculation method

(f) All power levels specified in this section are expressed in terms of the maximum power, averaged over a 100 millisecond interval, when measured with instrumentation calibrated in terms of an rms-equivalent voltage with a resolution bandwidth equal to or greater than the authorized bandwidth.

(g) Additionally, PCS stations will be subject to any power limits imposed by international agreements.


§ 24.133 Emission limits.

(a) The power of any emission shall be attenuated below the transmitter power \((P)\), as measured in accordance with §24.132(f), in accordance with the following schedule:

1. For transmitters authorized a bandwidth greater than 10 kHz:
   (i) On any frequency outside the authorized bandwidth and removed from the edge of the authorized bandwidth by a displacement frequency \((f_d)\) in kHz of up to and including 40 kHz: at least 43+10 Log_{10} \((P)\) decibels or 80 decibels, whichever is the lesser attenuation;
   (ii) On any frequency outside the authorized bandwidth and removed from the edge of the authorized bandwidth by a displacement frequency \((f_d)\) in kHz of more than 40 kHz: at least 80 decibels.

2. For transmitters authorized a bandwidth of 10 kHz:
   (i) On any frequency outside the authorized bandwidth and removed from the edge of the authorized bandwidth by a displacement frequency \((f_d)\) in kHz of up to and including 20 kHz: at least 43+10 Log_{10} \((P)\) decibels or 80 decibels, whichever is the lesser attenuation;
   (ii) On any frequency outside the authorized bandwidth and removed from the edge of the authorized bandwidth by a displacement frequency \((f_d)\) in kHz of more than 20 kHz: at least 80 decibels.

(b) The measurements of emission power can be expressed in peak or average values provided they are expressed in the same parameters as the transmitter power.

(c) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

(d) The following minimum spectrum analyzer resolution bandwidth settings will be used: 300 Hz when showing compliance with paragraphs (a)(1)(i) and (a)(2)(i) of this section; and 30 kHz when showing compliance with paragraphs (a)(1)(ii) and (a)(2)(ii) of this section.


§ 24.134 Co-channel separation criteria.

The minimum co-channel separation distance between base stations in different service areas is 113 kilometers (70 miles). A co-channel separation distance is not required for the base stations of the same licensee or when the affected parties have agreed to other co-channel separation distances.

§ 24.135 Frequency stability.

(a) The frequency stability of the transmitter shall be maintained within ±0.0001 percent (±1 ppm) of the center frequency over a temperature variation of −30 °Celsius to +50 °Celsius at normal supply voltage, and over a variation in the primary supply voltage of 85 percent to 115 percent of the rated supply voltage at a temperature of 20 °Celsius.

(b) For battery operated equipment, the equipment tests shall be performed using a new battery without any further requirement to vary supply voltage.